



# OIL ANALYSIS REPORT

WEAR	<b>NORMAL</b>
CONTAMINATION	<b>NORMAL</b>
FLUID CONDITION	<b>NORMAL</b>

Machine Id  
**FREIGHTLINER 38737**  
Component  
**Diesel Engine**  
Fluid  
**MOBIL 15W40 (--- QTS)**

## RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>WC0904517</b>	WC0904457	WC0861066
Sample Date		Client Info		<b>18 May 2024</b>	10 Feb 2024	14 Nov 2023
Machine Age	mls	Client Info		<b>0</b>	527609	323574
Oil Age	mls	Client Info		<b>30000</b>	30000	25000
Filter Age	mls	Client Info		<b>30000</b>	30000	25000
Oil Changed		Client Info		<b>Changed</b>	Changed	Changed
Filter Changed		Client Info		<b>Changed</b>	Changed	Changed
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

## WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>80	<b>3</b>	4	3
Chromium	ppm	ASTM D5185m	>5	<b>0</b>	0	<1
Nickel	ppm	ASTM D5185m	>2	<b>0</b>	0	<1
Titanium	ppm	ASTM D5185m		<b>0</b>	0	0
Silver	ppm	ASTM D5185m	>3	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>30	<b>3</b>	3	3
Lead	ppm	ASTM D5185m	>30	<b>0</b>	<1	<1
Copper	ppm	ASTM D5185m	>150	<b>2</b>	3	4
Tin	ppm	ASTM D5185m	>5	<b>&lt;1</b>	0	1
Vanadium	ppm	ASTM D5185m		<b>0</b>	<1	0
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

## CONTAMINATION

There is no indication of any contamination in the oil.

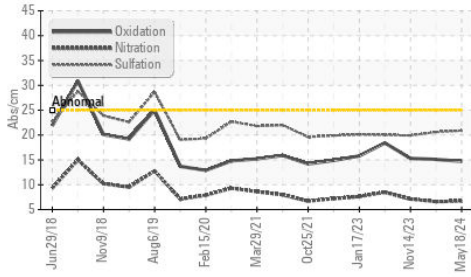
Silicon	ppm	ASTM D5185m	>20	<b>4</b>	4	4
Potassium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	<1	1
Fuel		WC Method	>5	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>3	<b>0.3</b>	0.3	0.4
Nitration	Abs/cm	*ASTM D7624	>20	<b>6.7</b>	6.6	7.1
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>20.9</b>	20.6	19.9
Silt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Debris	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Appearance	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Odor	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	<b>NEG</b>	NEG	NEG

## FLUID CONDITION

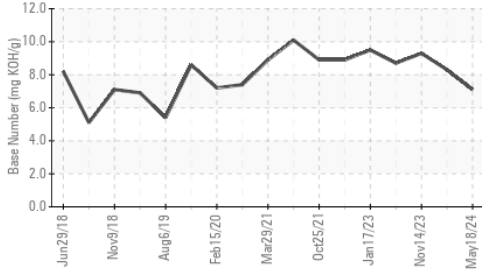
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m	>118	<b>&lt;1</b>	<1	<1
Boron	ppm	ASTM D5185m		<b>300</b>	224	4
Barium	ppm	ASTM D5185m		<b>0</b>	<1	0
Molybdenum	ppm	ASTM D5185m		<b>80</b>	75	63
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	0	<1
Magnesium	ppm	ASTM D5185m		<b>471</b>	624	1004
Calcium	ppm	ASTM D5185m		<b>1287</b>	1303	1098
Phosphorus	ppm	ASTM D5185m		<b>1017</b>	1066	1114
Zinc	ppm	ASTM D5185m		<b>1222</b>	1288	1356
Sulfur	ppm	ASTM D5185m		<b>3456</b>	3894	3417
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>14.7</b>	15.1	15.3
Base Number (BN)	mg KOH/g	ASTM D2896		<b>7.1</b>	8.3	9.3
Visc @ 100°C	cSt	ASTM D445		<b>13.5</b>	13.7	13.7

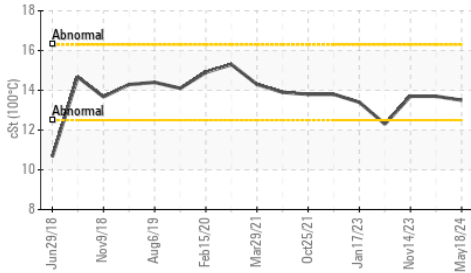
**FT-IR (Direct Trend)**



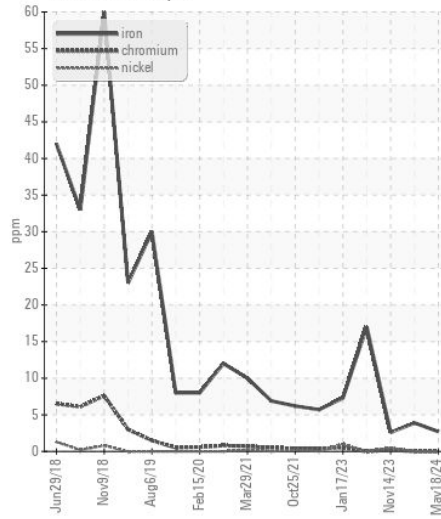
**Base Number**



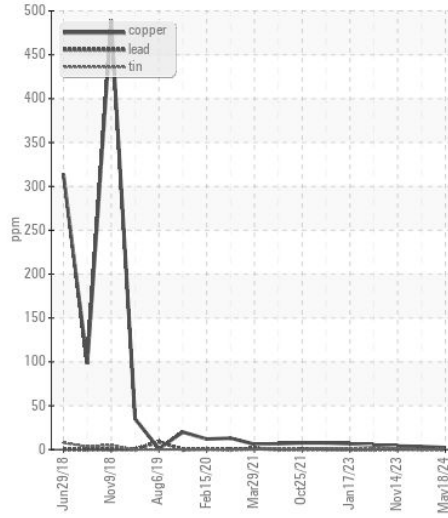
**Viscosity @ 100°C**



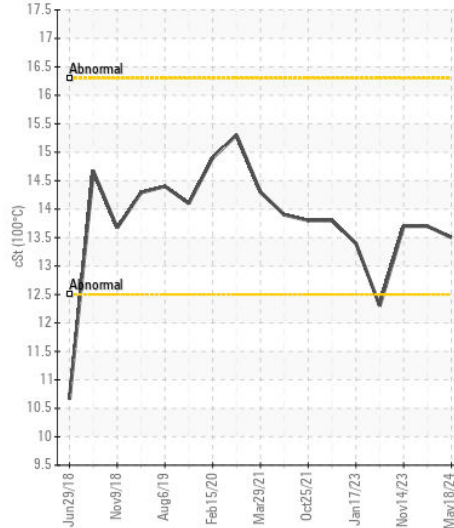
**Ferrous Alloys**



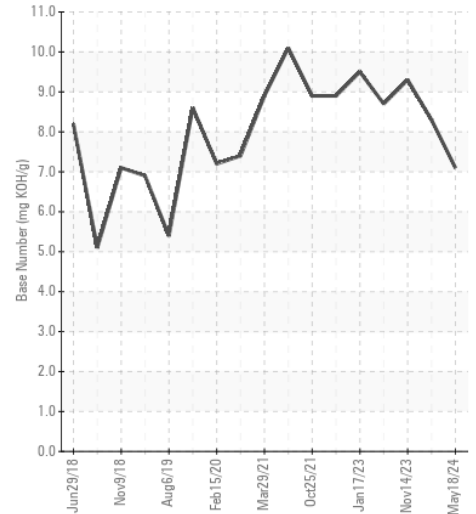
**Non-ferrous Metals**



**Viscosity @ 100°C**



**Base Number**



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0904517  
**Lab Number** : 06196441  
**Unique Number** : 11058564  
**Test Package** : FLEET

**Received** : 31 May 2024  
**Tested** : 03 Jun 2024  
**Diagnosed** : 03 Jun 2024 - Wes Davis

**SALEM NATIONALEASE CORPORATION**  
 198 PARK PLAZA DRIVE  
 WINSTON SALEM, NC  
 US 27105

Contact: Audrey Hopkins  
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To discuss this sample report, contact Customer Service at 1-800-237-1369.

\* - Denotes test methods that are outside of the ISO 17025 scope of accreditation.

Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

F: x: